

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

ORIGINAL

In the Matter of)
)

Implementation of the Section)
255 of the Telecommunications)
Act of 1996)

WT Docket No. 96-198

Access to Telecommunications)
Services, Telecommunications)
Equipment, and Customer Premises)
Equipment By Persons with)
Disabilities)

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COMMENTS OF NORTHERN TELECOM INC.

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SUMMARY

Even before enactment of Section 255 of the Telecommunications Act of 1996, Nortel had been working diligently to ensure that its products are accessible to and usable by persons with disabilities. Nortel recognizes that a significant portion of the market includes individuals with disabilities, and new communications products and services can enhance their work and private lives.

Nortel believes that Part 68 provides the appropriate model for regulation of the manufacturers obligations under Section 255. Under this approach, a manufacturer would certify compliance with the Commission's guidelines as part of the equipment registration process.

Nortel believes that it is essential that the Commission develop guidelines that are sufficiently clear and concise so as to provide guidance to manufacturers, but at the same time the guidelines should provide flexibility in achieving the goals. Nortel also believes that a manufacturer should be permitted to certify compliance based on its full product line, rather than attempting to include all features and functionalities on each piece of equipment. Nortel also urges the Commission to harmonize the guidelines with other countries where possible in order to take full advantage of scale economies.

In developing the guidelines, the Commission should focus on all three elements together: products should be (i)

"accessible to" and (ii) "usable by" people with disabilities (iii) "if readily achievable." The Commission should not view these elements in isolation. The guidelines must also recognize that in many cases the desired functionality can be provided through peripheral devices, so that compatibility with such devices should be promoted. In order to develop the necessary interworking standards, the Commission should encourage greater dialogue among peripheral manufacturers, and between peripheral manufacturers and telecommunications equipment manufacturers.

With respect to implementation and enforcement, Nortel believes that Commission efforts should be focussed on developing clear guidelines to ensure that equipment will be accessible to and usable by individuals with disabilities, not in punitive enforcement activities. Nortel thus urges the Commission to adopt an informal process for any complaint procedures under Section 255. Nortel also urges the Commission to allow sufficient time for development and deployment of the required capabilities, or else it runs the risk of threatening the "readily achievable" nature of any change.

Finally, with respect to the role of the Access Board, Nortel believes that the Commission should look to the Access Board for advice and input, but the Commission should also conduct its own independent evaluation. Thus, Nortel urges the Commission also to weigh the advice provided directly from manufacturers and service providers and from users with disabilities in response to this Notice of Inquiry, as well as considering recommendations from the TAAC, which includes

representatives from manufacturers, service providers, and organizations representing various disability groups.

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COMMENTS OF NORTHERN TELECOM INC.

Northern Telecom Inc. ("Nortel") hereby comments on the Commission's Notice of Inquiry addressing the new obligations imposed on telecommunications service providers and telecommunications product manufacturers by Section 255 of the Telecommunications Act of 1996.^{1/} Through that provision, Congress has mandated that a manufacturer of telecommunications equipment or customer premises equipment ("CPE") ensure that its products are "designed, developed and fabricated to be accessible to and usable by individuals with disabilities, if readily achievable."^{2/} As a manufacturer of telecommunications equipment

^{1/} Implementation of the Section 255 of the Telecommunications Act of 1996, WT Docket No. 96-198, FCC 96-382, released September 19, 1996 (hereafter cited as "Notice of Inquiry").

^{2/} 47 U.S.C. § 255(b).

and customer premises equipment, Nortel has a strong interest in the requirements that ultimately will emerge from this inquiry.

Nortel is the leading global supplier of digital telecommunications systems. Nortel supplies systems to businesses, universities, local, state and federal governments, the telecommunications industry and other institutions in more than 100 countries. The company employs more than 23,000 people in the United States in manufacturing plants, research and development centers, and in marketing, sales and service offices across the country.

Even before the adoption of Section 255, Nortel had been undertaking efforts to ensure that its products are "accessible to" and "usable by" individuals with disabilities. For example, Nortel is represented on the Telecommunications Access Advisory Committee (TAAC), which is developing recommendations on guidelines for the Architectural and Transportation Barriers Compliance Board (the Access Board). In the wireless arena, Nortel has conducted several technical programs concerning wireless systems and their use by the hearing impaired. Nortel believes that wireless terminals have a special value for users with disabilities, because a portable accessible telephone can be used from virtually anywhere.

Specifically, Nortel is a founding member of the industrial advisory board of the Center for the Study of Electromagnetic Compatibility at the University of Oklahoma, which is evaluating interference between wireless telephones and hearing aids. That program is also examining potential

solutions. Nortel also has its own Hearing Aid Education program in process at the Callier Center for Communication Disorders in Dallas.

Nortel has also conducted evaluations of the interaction between hearing aids and low-power in-building wireless phones, and participated in the development of a hearing aid compatibility policy regarding low-power wireless phones through the Terminal Attachment Program Advisory Committee (at that time under the auspices of the Canadian Department of Communications). Nortel has also provided wireless equipment to hearing aid manufacturers so that they can evaluate new shielding techniques. In addition, during the last two decades, human factors experts at Nortel have completed more than thirty studies on product usability for users with hearing impairment or other disabilities. Nortel was also a member of the Summit on Hearing Aids and Wireless Telephones and was represented as a co-chair on the Short-term Solutions Working Group and as members of the Long-term Solutions Working Group within the Summit process. Finally, Nortel has also participated in Commission proceedings addressing these issues, including providing input to the Negotiated Rulemaking Committee dealing with hearing aid compatibility.^{3/}

Of course, Nortel's interest in this subject is not driven simply by its desire to be a "good corporate citizen." Rather, as the *Notice of Inquiry* recognizes, there are some 40

^{3/} Report of the Federal Communications Commission Hearing Aid Compatibility Negotiated Rulemaking Committee, CC Docket No. 87-124, August 1995.

million Americans with disabilities.^{4/} It is also in Nortel's financial interest to sell its products to this significant portion of the marketplace, and thus to ensure that, whenever practical, its products are accessible to and usable by persons with disabilities. Many of Nortel's existing products, as well as many of its products currently under development, will well serve the general population while also bringing new communications capabilities to persons with disabilities. Nortel's awareness of this broad market and its desire to serve multiple sets of consumers with the same products has led Nortel to design equipment that will be usable by and accessible to as many segments of the market as possible, thereby creating scale economies that bring down the prices for all consumers.

A. Regulation of Manufacturers

One issue raised by the *Notice of Inquiry* is the nature and extent of the Commission's jurisdiction regarding manufacturers of customer premises equipment and telecommunications equipment.^{5/} Nortel believes that the Commission already has in place a model for "regulating" manufacturers of CPE and telecommunications equipment: Part 68

^{4/} *Notice of Inquiry* at ¶ 1.

^{5/} *Notice of Inquiry* at ¶ 11-12. Nortel observes that even though the *Notice of Inquiry* (at ¶ 9) draws sharp distinctions between "telecommunications equipment" and "customer premises equipment," those distinctions may become blurred. For example, the identical switching equipment would be considered CPE if it is deployed as a PBX at a business or campus, or it would be deemed telecommunications equipment if used by a carrier in its network.

Equipment Registration Procedures,^{6/} under which customers are prohibited from connecting equipment to the network that has not been registered.^{7/} The Part 68 regulations are already being used to ensure that certain forms of CPE are hearing aid compatible.

Nortel believes that with respect to the implementation of Section 255, the Commission should use the equipment registration paradigm, rather than attempt to create a new process for regulating manufacturers' compliance with the obligations resulting from this proceeding. Under this approach, a manufacturer registering equipment would be required to certify that the totality of its equipment offerings provides usability for persons with disabilities and complies with the Commission-issued guidelines promulgated in this docket. This procedure has worked well with respect to other Commission requirements, and is already well understood by manufacturers.

B. Development of Guidelines

One critical element of such a regulatory approach is the development of the guidelines. The guidelines must be sufficiently clear and concise that manufacturers can readily determine whether or not they are in compliance. At the same time, the guidelines must provide manufacturers with the

^{6/} 47 C.F.R. § 68.200 et seq.

^{7/} 47 C.F.R. § 68.100.

flexibility to tailor their products to meet different market requirements.

As the *Notice of Inquiry* recognizes, there are a wide variety of disabilities and potential solutions to meet the varying needs.^{8/} It is neither economic nor technically practicable to design every product to accommodate every disability. Such an obligation would severely limit the "readily achievable" nature of product accessibility and usefulness, in light of the difficulty of incorporating all solutions into every product. Such an obligation would thereby defeat the purpose of Section 255. As an example, a person with hearing loss may be served by a telephone set that has sufficient volume control, but that solution would not be adequate for a person with both a hearing loss and a muscle disability that prevents them from holding the handset to their ear. Nortel is developing handset solutions that would serve such an individual with both hearing loss and muscle disability, but this is a separate and distinct product. Thus, the Commission should determine whether manufacturers are meeting the guidelines established in this proceeding by examining the families of products being made available.

Likewise, the Commission should adopt deployment schedules that provide manufacturers sufficient time to design, modify and/or develop a broad range of equipment, since it will not be possible to implement all of the requisite changes at once. Accelerating development schedules for creating new

^{8/} *Notice of Inquiry* at ¶ 22.

features for telecommunications products could add significant cost, thus making the changes no longer "readily achievable." Nortel urges the Commission to seek guidance from manufacturers as to the timetables that would apply to the deployment of specific features or functions.

In developing the guidelines, the Commission should also, to the extent possible, coordinate accessibility requirements with other countries. Adopting harmonized requirements will help to lower costs by avoiding the added expenses that come with developing different equipment for different nations. Nortel thus urges the Commission to consult with its counterparts in other nations to ensure uniformity whenever possible.

C. Multiple Factors Must Be Considered

When Congress established the obligations of manufacturers in Section 255, it incorporated several key tenets that the Commission must take into account when developing guidelines. Section 255(b) requires that manufacturers ensure that their products are (i) "accessible to" and (ii) "usable by" people with disabilities (iii) "if readily achievable." Nortel believes that these three concepts should be read together rather than in isolation.

The Commission should not focus simply on the cost of the desired design feature, but should also consider its utility. The guidelines should avoid mandating features that may be technically available but are not efficient solutions for the

target population. In other instances, the potential solutions may be relatively costly to develop and deploy. The benefit provided by the feature should be assessed in terms of the increase in the retail price of a product that incorporates that feature, the number of users that will find it useful, the ease with which they can use it, and whether its presence adversely affects other users.

D. Compatibility With Peripheral Devices

Section 255 also recognizes that it may be possible to achieve the desired goals through the use of telecommunications equipment and CPE that is compatible with peripheral devices. If the Commission requires that all telephone sets include accessibility for the disabled in the device itself, such an obligation would limit consumer choices and limit the development of smaller, less expensive telephones, a particularly adverse consequence for wireless handsets.^{9/} Allowing manufacturers to meet their obligations to make functionalities available through the use of peripheral devices would in many instances achieve the goals of Section 255 without imposing excessive costs on individuals with disabilities or imposing unnecessary costs on others who may not need those functionalities. Nortel believes

^{9/} As the experiences with cellular and PCS handsets illustrates, reducing the size and costs of the handsets has led to widespread acceptance of these wireless services. In turn, the availability and affordability of wireless services has greatly increased the productivity and security of individuals. Those benefits would be threatened if we were relegated to the days when a "portable" cellular phone weighed several pounds and had to be carried in a shoulder sack.

that peripheral equipment may present the best solution for individuals with multiple disabilities.

Nortel does not believe, however, that it is only manufacturers of telecommunications equipment and CPE that need to be involved in the process of ensuring compatibility between the telecommunications products and the peripheral devices. Such compatibility will be easier to achieve if interworking standards are established for peripheral devices such as TTY equipment. In order to facilitate such compatibility, the Commission should encourage greater dialogue among peripheral device manufacturers, and between peripheral device manufacturers and telecommunications equipment manufacturers, to promote compatibility between telecom devices and peripheral devices.^{10/} Nortel therefore encourages the Commission to provide flexibility in the guidelines so as to encourage new innovations in service and equipment for persons with disabilities through a manufacturer's incorporation of features and functionalities into mass market products as well as enhanced compatibility of peripheral devices.

E. Implementation and Enforcement

The *Notice of Inquiry* also raises questions concerning the implementation and enforcement of obligations created

^{10/} Nortel observes that there has been some progress in this area with respect to the compatibility of wireless services and hearing aids as a result of proceedings at the Commission.

pursuant to Section 255.^{11/} Nortel believes that the Commission should adopt clear and concise guidelines for manufacturers to follow as a condition precedent to implementation and enforcement of the statute. Nortel further believes that the guidelines should be focused on the outcome, thereby providing manufacturers with flexibility to develop potentially varying but nonetheless effective means to achieve those desired results. Nortel also believes that manufacturers should be permitted a sufficient period of time to come into compliance.

Vague guidelines standing alone provide little guidance to manufacturers and invite unnecessary complaints. Guidelines are to be preferred over rigid rules, since such rules tend to lock in current knowledge and technology. Moreover, the process could be further delayed if it was necessary to conduct a notice and comment rulemaking in order to modify the rules, as would be necessary under the Administrative Procedures Act. In contrast, guidelines will foster innovation in meeting the needs of individuals with disabilities, since manufacturers will have the flexibility to meet goals or standards in varying ways.

Nortel is also concerned that without clear guidelines, any complaint or enforcement process would be arbitrary. The *Notice of Inquiry* seeks comments on how a complaint process should work, since Section 255 gives the Commission "exclusive jurisdiction with respect to any complaint under this section."^{12/} As a general principle, Nortel believes that the

^{11/} *Notice of Inquiry* at ¶ 28.

^{12/} *Notice of Inquiry* at ¶ 36, quoting 47 U.S.C. § 255(f).

Commission should focus on developing clear guidelines to ensure that equipment will be accessible to and usable by individuals with disabilities, rather than on punitive enforcement activities.

Nortel thus urges the Commission to adopt an informal process for any complaint procedures under Section 255. Under this approach, a dissatisfied customer would initially contact the manufacturer, who would be responsible for designating in advance a contact person or ombudsman that the members of the public could communicate with directly (perhaps through an 800 or 888 number).^{13/} If the customer was unsuccessful in having his or her problem resolved through such an effort, then he or she could contact the Commission.

Nortel believes that a separate, formal complaint procedure under Section 255 that would apply to telecommunications equipment and CPE manufacturers is likely to create unnecessary bureaucracy. For egregious situations, such as where a manufacturer fails to attempt to resolve problems that have been brought to its attention or makes no good faith effort to comply with the Commission-issued guidelines, the Commission retains the ability to revoke the equipment registration that allows the equipment to be sold.

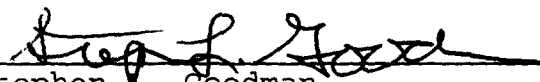
^{13/} Nortel also believes that the individual need only contact the company marketing the final product. It should be the responsibility of that company to interface with the manufacturer of a component if the trouble resides there. Cf., Notice of Inquiry at ¶ 12.

F. Role of the Access Board

Finally, the *Notice of Inquiry* seeks comment on the role of the Access Board in developing equipment and CPE guidelines.^{14/} Nortel believes that the Commission should independently evaluate the issues, taking into account (i) direct input from manufacturers and service providers and from users with disabilities in response to this Notice of Inquiry; (ii) suggestions and advice from the Access Board; and (iii) recommendations from the TAAC, which includes representatives from manufacturers, service providers, and organizations representing various disability groups.

In sum, Nortel believes that if the Commission proceeds as set forth above, the public interest will best be served. The needs and interests of individuals with disabilities will be met, without the imposition of unnecessary costs or delays.

Respectfully Submitted,


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^{14/} *Notice of Inquiry* at ¶ 35.